

CLAIMS

SUB
A1

1. A method for treating a sebaceous gland disorder comprising the steps of
 - a) topically applying 5-aminolevulinic acid (ALA) to a section of skin afflicted with a sebaceous gland disorder, wherein the ALA is compounded for delivery to sebaceous glands and is converted into a photosensitizing agent actuable by energy that penetrates outer layers of epidermis,
 - b) causing a sufficient amount of the ALA to infiltrate into spaces in the skin; and
 - c) exposing the infiltrated section of skin to about 10 J/cm^2 of energy or greater to cause the photosensitizing agent to become photodynamically activated and durably modulate the sebaceous gland disorder.
2. The method of claim 1, further including the step of waiting for the ALA to be metabolized to *PpIX* before exposing the infiltrated section of skin.
3. The method of claim 1, wherein the infiltrated section of skin is exposed to at least about 100 J/cm^2 .
4. The method of claim 2, wherein an energy source for the energy is selected from among
 - i) a laser, such as a pulsed dye laser or laser diode array, and
 - ii) sunlight.
5. The method of claim 1, wherein the energy has a wavelength in the range of between about 320 and about 700 nm.
6. The method of claim 1, wherein the energy has a wavelength in the range of between about 550 and about 600 nm.
7. The method of claim 1, wherein the ALA is suspended in a pharmaceutical carrier.

8. The method of claim 7, wherein said pharmaceutical carrier is selected from among a liposome and an aqueous solution.
9. The method of claim 1, wherein the ALA is compounded to penetrate the skin via a pilosebaceous unit.
10. The method of claim 1, wherein the treatment modifies the opening to the infundibulum.
11. The method of claim 11, wherein the treatment opens the opening. (112)
12. The method of claim 1, wherein the ALA penetrates a sebaceous gland.
13. The method of claim 13, wherein the treatment modifies the sebaceous gland.
14. The method of claim 1, wherein treatment effects durable amelioration of a sebaceous gland disorder including at least one of acne vulgaris, acne rosacea, and sebaceous gland hyperplasia.
15. The method of claim 1, further comprising the step of applying ultrasound to drive the ALA into the spaces.
16. The method of claim 1, wherein the ALA is compounded to enter spaces in hair ducts in the skin not occupied by hair.
17. The method of claim 1, wherein the ALA is compounded to enter space within sebaceous glands.
18. The method of claim 14, wherein the method provides a diminishment of the sebaceous gland disorder for a period of at least 5 weeks.

19. The method of claim 18, wherein the method provides a diminishment of the sebaceous gland disorder for a period of at least 10 weeks.
20. The method of claim 19, wherein the method provides a diminishment of the sebaceous gland disorder for a period of at least 20 weeks.
21. The method of claim 19, wherein the sebaceous gland disorder is acne.
22. A method for modifying pilosebaceous units, said method comprising the steps of:
- a) topically applying ALA to a section of a subject's skin, wherein the ALA is compounded to enter the subject's skin and be converted into a photosensitizing agent localized at a pilosebaceous unit and photo-actuable by energy which penetrates outer layers of epidermis; and
 - b) exposing the section of skin to about 10 J/cm^2 of energy or greater to cause the photosensitizing agent to become photodynamically activated and modify the pilosebaceous unit.
23. The method of claim 22, wherein the steps of applying and exposing are carried out to durably modify openings to the infundibulum of pilosebaceous units.
24. The method of claim 22, wherein the photosensitizing agent is *PpIX*.
25. A method for treating acne, comprising the steps of:
- a) topically applying 5-amino levulinic acid (ALA) in the range of between about 0.1 and about 1 percent by weight to an area of skin afflicted with acne, wherein the ALA is converted into a photosensitizing agent that is activated by energy which penetrates outer layers of epidermis; and
 - b) exposing the infiltrated section of skin to energy in the range of about 1 to about 10 J/cm^2 to cause the photosensitizing agent to become photodynamically activated and durably eradicate bacteria associated with acne.

26. A method for a permanent cessation of acne, comprising the steps of:

- a) topically applying 5-amino levulinic acid (ALA) in the range of between about 10 to about 30 percent by weight to skin afflicted with acne, wherein the ALA is converted into a photosensitizing agent localized in a pilosebaceous unit and activated by energy that penetrates outer layers of epidermis;
- b) causing a sufficient amount of ALA to infiltrate the skin; and
- c) exposing the infiltrated section of skin to energy in the range of about 50 to about 200 J/cm² to cause the photosensitizing agent to become photodynamically activated, thereby causing microscarring about the sebaceous glands in the afflicted area occurs.

27. The method of claim 26, wherein the steps a) -b) are carried out to cause sebaceous glands in the afflicted tissue to permanently decrease in size.

28. The method of claim 26, wherein the steps a) -b) are carried out to cause sebum production in the sebaceous glands to be reduced.

29. A method for the treatment or prevention of acne, comprising the steps of:

- a) topically applying 5-amino levulinic acid (ALA) in the range of between about 0.10 to about 30 percent by weight to skin and a substance which absorbs UV radiation in the UVA or UVB range, wherein the ALA is converted into a photosensitizing agent that is activated by energy which penetrates outer layers of epidermis;
- b) causing a sufficient amount of ALA to infiltrate the pilosebaceous unit; and
- c) exposing the infiltrated section of skin to sunlight in the range of about 1 to about 50 J/cm² to cause the photosensitizing agent to become photodynamically activated eradicating the bacteria associated with acne.